

## REMARKS

Applicants respectfully request reconsideration of the above-identified application in view of the foregoing amendments and the following remarks. Claims 1-24 are currently pending in the application.

In the Office Action of May 17, 2005, Claims 1-6 and 8-24 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,853,772 to Kikuchi, and were also rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,473,841 to Murakoshi et al. Claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kikuchi in view of U.S. Patent No. 5,821,530 to Lefevre et al., and was also rejected under 35 U.S.C. § 103(a) as being unpatentable over Murakoshi et al. in view of Lefevre et al.

Applicants respectfully traverse the rejections.

A. U.S. Patent No. 4,853,772 to Kikuchi

With regard to the '772 patent, it is submitted that the reference does not teach or suggest each element of the pending claims including: an endoscope, an imaging chip at the distal end of the endoscope that includes an imaging array, an analog to digital converter and an encoder circuit that produces digital video signals that are sent to the encoder circuit and an optical fiber that transmits signals from the imaging chip and extends from the distal end of the endoscope toward the proximal end.

In the Office Action, the Examiner has cited the embodiment shown in FIGURE 5 of the '772 patent. However, in this embodiment, the video signal processing electronics 35 that contains the isolating device 40 is not located at the distal end of the endoscope for transmitting signals from the solid state imaging device 3. The isolating device 40 is located after a cable 4, which is used for transmitting the video signals from the solid state imaging device to a photomodulator 72. See Col. 4, lines 57-65.

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Because the '772 patent does not teach, disclose, or suggest the claimed combination of elements including an optical fiber used for transmitting signals from the imaging chip, whereby the optical fiber extends from the distal end of the endoscope towards the proximal end, Claims 1, 12 and 16 as well as the claims that depend thereon are allowable.

B. U.S. Patent No. 4,473,841 to Murakoshi et al.

The Murakoshi et al. '841 patent is directed to a video signal transmission system for an endoscope using a solid state image sensor. As shown in Figure 2, and as described in Col. 2, lines 32-46, an imaging portion 3 comprises a self-scanning solid state image sensor such as a charge coupled device (CCD) 6, an amplifier 7, a modulator 8 and an electrical-to-optical signal converter 9 as typified by a light emitting diode or a semi-conductor laser. A fiber optic cable 11 is disposed in a connecting section 10 shown in Figure 1 and may comprise at least a single length of optical fiber. However, applicants submit that the reference does not teach or suggest the claimed combination of elements including an imaging chip with an integrated analog-to-digital converter and encoder circuit for producing digital video data signals that are sent through an optical fiber.

As noted in the title of applicants' specification, applicants' invention is directed to an endoscope with fiber optic transmission of digital video signals. As stated on page 3, lines 1-5 of applicants' specification, "it will be appreciated that fiber optic transmission overcomes the difficulty of electrical transmission of wide band digital video signals via miniature cables. . . ." As described on page 4, lines 7-9, and as shown in FIGURE 2 of applicants' specification, one embodiment of the invention includes a CMOS chip 40 having an imaging array 42, an analog-to-digital converter 44, and a pulse-code modulator (PCM) circuit 46. It is stated to be advantageous to integrate all of the components on a single imaging chip 40. Among other

considerations, such a configuration reduces the physical size required for the circuitry, which is an important factor in endoscope design.

Because the '841 patent does not teach or suggest each of these features, it is submitted that with respect to Claims 1, 12, and 16, applicants respectfully submit the claims are allowable.

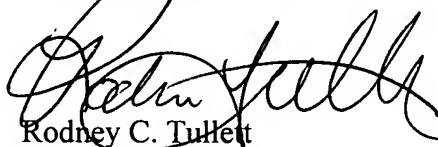
Claims 2-11, 13-15, and 17-24 depend from the independent claims discussed above, and are therefore believed to be allowable for the reasons discussed above. In addition, the dependent claims allowable for additional reasons. For example, dependent Claims 3 and 17 further specify that the imaging chip is a single CMOS chip, and each of the imaging array, analog to digital converter, and encoder circuit are fabricated using CMOS processes on the single CMOS chip. Applicants respectfully assert that this configuration is not taught, disclosed or suggested by the cited prior art references.

#### CONCLUSION

Applicants respectfully submit that Claims 1-24 are in condition for allowance. Therefore, applicants respectfully request that the claims be allowed and the case be passed to issue. Should any further questions remain, the Examiner is invited to contact applicants' attorney at the telephone number listed below.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the U.S. Postal Service in a sealed envelope as first class mail with postage thereon fully prepaid and addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the below date.

Date:

September 19, 2005

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